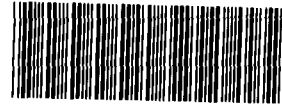




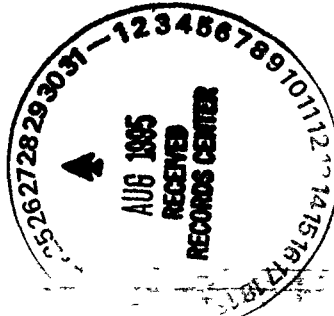
Rocky Mountain  
Remediation Services, L.L.C.  
*protecting the environment*

Rocky Flats Environmental Technology Site  
P O Box 464  
Arvada Colorado 80007  
Phone (303) 966-2677  
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000057839

August 24, 1995



95-RM-ER-0060-KH

Tim G. Hedahl  
ER/WM and Integration  
Kaiser Hill  
P O Box 464  
Rocky Flats Environmental Technology Site  
Arvada, Colorado 80007

LETTER OF TRANSMITTAL REVISIONS TO OPERABLE UNIT (OU) 7 DRAFT INTERIM MEASURE/INTERIM RESPONSE ACTION DECISION DOCUMENT (IM/IRA DD) AND CLOSURE PLAN - AMP-063-95

This letter transmits 14 copies of the revisions to the IM/IRA Decision Document for OU 7. Two copies are for Kaiser-Hill and the remaining 12 copies are to be transmitted to the Department of Energy-Rocky Flats Field Office (DOE-RFFO) for insertion, and subsequently two copies each to the United States Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE).

These revisions specifically address comments 6, 9 and 10 received from the Department of Energy (Attachment 1). In order to streamline the document review process, the Department of Energy, Kaiser-Hill and Rocky Mountain Remediation Services (RMRS) had a concurrent review period.

Recent discussions between RMRS and the Integrating Contract personnel have identified areas requiring further technical evaluation. Specifically, the following items will possibly require discussions with the DOE-RFFO, CDPHE and EPA:

- Proposed Slurry Wall - RMRS personnel believe that the slurry wall is an integral part of the Presumptive Remedy for Municipal Landfills because of the site-specific groundwater conditions at Operable Unit Seven. The Presumptive Remedy for Municipal Landfills has been approved by the Colorado Department of Public Health and the Environment and the Environmental Protection Agency for streamlining the closure of Operable Unit Seven. The presumptive remedy for municipal landfills is containment of the waste mass to minimize leachate generation. Modeling indicates 50% of the leachate recharge is from the break in the existing groundwater intercept system. A closure scenario involving capping only would not meet the intent of containment. The requirement of a slurry wall requires further evaluation.
- Long-term Leachate Control - None of the 35 potential contaminants of concern exceeded the open-space recreational user Programmatic Preliminary Remediation Goals (PPRGs). Although the leachate does not present an unacceptable risk, it does not meet the OU 7 specific Applicable or Relevant and Appropriate Regulations (ARARs) at the source area. RMRS has proposed delisting the leachate in the IM/IRA DD and modeling indicates that ARARs will be met at the proposed Point of Compliance in No Name Gulch. If the point of compliance is determined to be at the source area, long-term leachate control will require further evaluation.

**ADMIN RECCRD**

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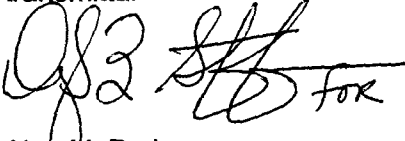
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- Grading - The proposed final grade is inconsistent with retaining the East Landfill Pond and Dam. If the pond and dam remain, the final grade should be adjusted to decrease the frequency of batch discharges and pond maintenance.
- East Landfill Pond and Dam - Because of concerns regarding Preble's Jumping Mouse habitat and wetlands it has been proposed to retain the East Landfill Pond and Dam. The East Landfill Pond represents approximately 3 percent of the total open water habitat at the Site. The mechanics and costs associated with operation and maintenance of the East Landfill Pond and dam must be addressed. If leachate collection and treatment is not required, RMRS recommends that the dam be breached.

We have tentatively scheduled a meeting with the OU 7 technical staff for August 31 at 1 00 at the Interlocken Facility to address the aforementioned concerns.

Please contact Edward Mast, of my staff, at X8589, if you have any questions concerning this transmittal.

 for

Alan M. Parker  
Vice President  
Environmental Restoration Projects

Enclosures  
As Stated

T M Lindsay  
P J Martin  
E C Mast  
L J Peterson-Wright  
D E Steffen  
22.053F

## Informal Memo

SAIC TMSS Golden

Phone: 273-1250

Environmental Restoration

DOE/Rocky Flats Field Office

Fax: 279-5525

August 15, 1995

To: Peg Witherill  
OU 7 Manager  
Environmental Restoration  
DOE RFFO  
Fax: 966-7447

As requested, enclosed are Technical Comments and Recommendations on the document titled "Draft Phase I IM/IRA Decision Document for Operable Unit 7 Present Landfill." Comments were obtained from TMSS personnel from both Environmental Restoration and from the Environmental Project Management Division of AMPME. Comments have also been obtained from DOE staff in the AMPME/Project Management Division. We do not believe that these comments impact the cost, schedule, or scope of the contract with Integrating Contractor (IC).

Comments from all sources have been combined and collated below. The AMPME/Project Management Division has indicated that they consider the resolution of comments 6, 9, and 10 of particular importance to the finalization of this document. We suggest that the IC should carefully consider how these comments should be resolved when deciding whether to directly transmit the current draft to the regulatory agencies or to incorporate these comments prior to submittal.

Comments have also been directly faxed to Steve Hahn of Kaiser-Hill as you requested.

cc:

J. Stover, DOE, AMPME  
S. Hahn, RMRS  
T. Greenberg, SAIC  
File

Technical Review of Draft  
"OU 7 Draft Phase I IM/IRA Decision Document"

TMSS/Environmental Restoration RFFO  
TMSS/Project Management Division RFFO  
DOE/Project Management Division RFFO  
Comments and Recommendations to Environmental Restoration RFFO

August 15, 1995

Specific Comments/Recommendations

1. Section 6.x.x.x "Detailed Analysis of Alternatives"  
Mn as a COC. Mn and some other metals which occurred above background values were proposed, justified, and dropped as COCs at OU 1 and OU 2 prior to conducting the feasibility study for these OUs. Justifications and white papers were submitted to EPA and CDPHE discussing the sporadic, natural occurrence of Mn dioxide at RFETS and its potential to occur at high levels at some sites. Geochemical modeling has also been conducted which shows that Mn dioxide is not in equilibrium with UHSU groundwater and can be easily dissolved with fluctuations in the water table. Since Mn was not proposed for elimination prior to conducting the FS portion of this study, it is suggested that discussions regarding Mn be beefed up in Section 6.x.x.x "Compliance with ARARs", using information from OU 1 and from the geochemical modeling which has been done. These prior efforts should provide help in justifying the expectations that Mn will not achieve ARAR and that it is actually naturally occurring.
2. Section 6.4 and Table 6-4 "Summary of Comparative Analysis"  
The 0-20 point weighting system which was devised and used needs to be explained further? Background discussion should be provided describing why a point system was designed and used since this is technically not a requirement under CERCLA. It is not clear from the discussion as to why a 0-20 point system was devised vs another point system (0-10) etc.? How was the "relative importance" of the CERCLA criteria for OU 7" determined? This statement is made without any further discussion or explanation (See also Comment 3 below).
3. Section 6.3.2 vs Section 6.4.  
Section 6.4 states that short-term effectiveness is the lowest weighted comparative criteria relative to OU 7. Dust generation from construction and the potential for sediment loading to riparian zones and the pond areas may make this criteria extremely important because of possible disturbance to near-by Prebles Meadow Jumping mouse habitat. Short-term effectiveness will be an extremely important criteria at RFETS, given that dust generation and potential sediment loading to near-by riparian areas from any construction activity will be viewed by the USFWS as extremely important and potentially damaging. Short-term effectiveness may be extremely important (or equally important to other criteria) given that large differences exist between the potential dust generation which could be produced from the three different cap alternatives. The low weight given to this criteria should be thoroughly explained and even reconsidered to have equal weight as the other criteria.

4. **Section 2.1.6**  
A description has been provided of OU 6 IHSSs 166.1, 166.2 and 166.3 (sludge pits) to the northeast of the landfill proper. These IHSSs are discussed nowhere else in the document, although they are shown on several of the figures that indicate the plan view of the cap. Some figures (like Figure 5-1) show the OU 6 IHSSs and indicate that the "extent of landfill cap" will cover part of IHSS 166.1. Other figures (like 5-2) show a smaller "cover area" corresponding to the "edge of landfill" and indicate the "edge of regrade area" in the same configuration as "edge of landfill cap" from the previous figure. Our interpretation is that landfill closure will not specifically address the OU 6 IHSSs but will incidentally encroach on 166.1. The document should make this (or what ever interpretation is proper) clear. The document should indicate that coordination is occurring between the two OUs and that the OU 6 DD will directly address these IHSSs.
5. **Section 2.5.1, last bullet on page 2-24, and Section 2.5.8**  
The document apparently utilizes only one round of data for the Phase II wells downgradient of the East Landfill Pond dam. If later rounds of sampling show elevated contaminants, the no action determination for down-gradient ground water contamination could be compromised. Does RMRS plan to issue these later data when they are validated.
6. **Sections 5.1.2, 6.2.2.2 and 8.17**  
The Stanley Lake Protection Project (SLPP) is incorrectly identified as providing mitigation wetlands to offset wetlands destruction caused by the OU 7 cap. The SLPP is a City of Westminster project funded with DOE grant moneys and the wetlands being created are not eligible to serve as a Rocky Flats wetland mitigation bank. An additional wetland acreage immediately adjacent to the SLPP wetland is currently being designed and is planned to serve as a mitigation wetland. The funding and schedule for construction of this wetland is currently uncertain because of other demands on grant funds. The document should be revised in the listed sections (and any other relevant sections) to indicate intent to offset the loss of the 1.1 acres of wetland in OU 7 with a portion of the 8 acre mitigation wetland adjacent to the SLPP pending final approval of the project. Furthermore, the timing of this potential wetland construction versus both landfill closure construction and implementation of the accelerated leachate collection and treatment action should be presented. If the Integrating Contractor (IC) organization has received any assurances from either the U.S. Fish and Wildlife Service and/or the EPA that either construction project can go forward in advance of mitigation wetland construction, we urge and suggest that those assurances be obtained in writing. We are requesting that the OU 7 project team maintain close contact with John Rampe, Senior Regulatory Advisor in AMPME, regarding developments on the funding and construction schedule for the mitigation wetland.
7. **Sections 5.1.3 and 6.2.2.1**  
The slopes of the east face of the landfill cap have been changed from 6H:1V (16.67%) to 5H:1V (20%), which has apparently allowed the reduction of the fill layer volume from 225,000 cubic yards to 131,400 cubic yards. However, the 6:1 slope is still indicated on some of the figures (Figures 5-2 and 7-3). Also, in Section 5.1.3, the discussion of possibly using slopes different than 20% on the east face is semantically confusing. We think the intent was that a slope angle greater than 20% (i.e. steeper) could be used if the slurry wall is constructed sooner and ground water levels decrease within the landfill; please clarify.

8. Section 7.3.1.2 and Appendix J.

The erosion calculations for the 20% slope are reported in the text as being the same as for the 16.67 % slope in the Preliminary Draft DD: 1.8 tons/acre/year. Appendix J shows calculations for the 16.67 % slope but none for a 20% slope. The drainage area contributing flow to the 6:1 slope appears very large at 12.7 acres (Table J-1) or 12.2 acres (Attachment J1) certainly larger than the actual 6:1 or 5:1 sloped area on Figure (7-3), which we guesstimate at 4 to 8 acres. Also, the slope lengths listed in Attachment J1 range from 300 to 500 feet, but only the 300-foot length appears to have been used in the SEDCAD calculation. Even if the drainage area contributing flow were 12.2 or (12.7) acres, the 16.67 % slope area on which the erosion occurs is much less and would yield a higher erosion rate per acre. No matter how the erosion calculations are finalized, the IC should consider erosion controls on the steep eastern slope of the cap. Surface flow from the shallowly sloped upper sections of the cap should be diverted away from the steep slope and temporary slope protection measures should be incorporated into the design for the early post-construction stage before vegetation becomes established.

9. Draft Proposed Plan

The final sentence of the 4th paragraph on page 1 of the Draft Proposed Plan is erroneous. It reads, "This PP addresses only the presumptive remedy for landfill containment." The purpose of the focused risk assessment, which is incompletely presented on page 3 of the Draft PP, was to determine whether remediation is needed for pathways and media not addressed by the presumptive remedy. The Decision Document concludes that no action is needed for these media. The proposed plan is intended to be "comprehensive" and result in the issuance of a final CAD/ROD for OU 7, as we understand the process and project. Thus, the above quoted sentence should actually read something like, "This PP addresses the presumptive remedy for containment of the landfill source area and also addresses pathways and potentially contaminated media outside the source area, resulting in a Comprehensive Plan for OU 7."

10. General Re: Slurry Wall -- From the information presented, it appears that the slurry wall maintenance activity is an integral part of the remedial action. There is concern that since the slurry wall is only designated as a maintenance activity, it may be pushed aside and not completed. The Cap alone will not be an effective remedy. The Slurry Wall discussion in Section 1.3.2 should be strengthened. As an example, a reference to Section 1.3.2 could be placed in Chapter 7. It should ensure that the OU7 remedy is integrated and considers a phased approach with the slurry wall completed before the Cap. Completion of the slurry wall first will allow for an assessment of the wall and any possible corrective actions to take place before the Cap is in place. After the Cap is in place, any repairs or corrections to the wall probably will be much more costly. Also, a phased approach will allow progress to continue towards remediation without committing an undue portion of ER Program resources for a single Fiscal Year to OU7.

Apparently, the slurry wall is not incorporated into project cost estimates. The discussions about the slurry wall appear to presume that the reader knows about the wall. There is no clear, concise statement that the slurry wall is part of the Recommended Alternative. In Section 7.1, Recommended Alternative Description, the only mention of the slurry wall comes in the following sentence. "In addition, the proposed slurry wall eliminates 93 percent of the groundwater inflow as discussed in Section 2.3." This begs the question: Who is proposing the slurry wall and why is it in Appendix C, if it is not described as part of the Recommended Alternative? If it is not part of the Alternative why isn't there a Cap only scenario? The modeling scenarios do not match what is discussed in Section 7.1. The conceptual design in Section 7.3 does not discuss a slurry wall. Maintenance of a slurry wall was used to eliminate

RAOs and used in modeling scenarios as the only mechanism besides the cap to reduce groundwater inflows. There are statements throughout the document about how effectively the groundwater inflow will be reduced. This is only achieved by utilizing both the cap and slurry wall. If the slurry wall is part of the remedy, it should be discussed as such in the document in general.

11. Section 2.3.4.1, Figure 2-5  
Figure 2-5 gives the appearance that the groundwater inflow under the groundwater intercept system comes only from a westerly direction. Need to improve Figure 2-5, possibly by referring to Sections 2.3.4.1 and 2.3.5 or marking on figure.
12. Section C.8.2, Last sentence in 1st paragraph  
It is unclear what the author is attempting to discuss. It appears that the author is trying to discuss the mechanics of the model and pointing out that part of the modeling effort was to track water particles, not contaminants. A retardation factor of one represents no retardation relative to water movement. The purpose of the particle tracking should be discussed in the beginning of the section. This will strengthen the section.
13. Section C.8.2, 2nd Paragraph  
Discussion in this paragraph needs to be strengthened to increase reader's understanding of modeling methodology and importance of slurry wall and cap. Several points could be added to improve section. There should be additional discussion about why an effective porosity of 0.3 was used when other studies have used a value of 0.1. We question the citations of Freeze and Cherry, 1989 and Fetter, 1988 for the statement in C.8.2 Particle Tracking which says that "Multiple sources report that effective porosity is approximately equal to overall porosity." The statement should be verified with a page number of section from the citation. Furthermore, the reference for Freeze and Cherry in Appendix C is wrong. The year should be 1979, as cited in the text document.
14. Section C.8.1  
A "Cap Only" scenario should have been analyzed as a reasonable alternative to the no-action alternative. This may strengthen the case for the slurry wall. Also, brief descriptions should be provided for the different scenarios modeled.
15. Editorial Comment, Figure 2-17  
The dark blue lines showing the groundwater areas above and below the dam are not noted under the Figure Explanation. The color used is difficult to distinguish from the other blue colors.

7/7